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Waxes in asphaltenes of crude oils and wax deposits

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Abstract

© 2016, The Author(s). Composition and molecular mass distribution of n-alkanes in asphaltenes of crude oils of different ages and in wax deposits formed in the borehole equipment were studied. In asphaltenes, n-alkanes from C12 to C60 were detected. The high molecular weight paraffins in asphaltenes would form a crystalline phase with a melting point of 80–90 °C. The peculiarities of the redistribution of high molecular paraffin hydrocarbons between oil and the corresponding wax deposit were detected. In the oils, the high molecular weight paraffinic hydrocarbons C50–C60 were found, which were not practically detected in the corresponding wax deposits.

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Keywords

Asphaltenes, Crude oil, Hydrocarbon composition, Wax deposit, Waxes